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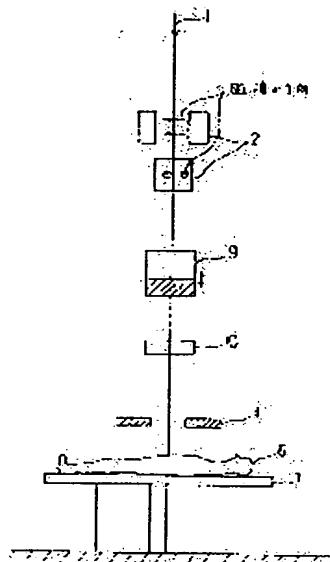
(54) APPARATUS FOR CURING CANCER WITH CHARGED PARTICLE RAYS

(57)Abstract:

PURPOSE: To use a radiotherapy equipment without replacing a ridge-filter and a bolus for each patient, by providing a range-shifter for varying energy of charged particle rays and a collimator for varying the shape of a plane perpendicular to the orbit and by three-dimensionally radiating charged particle rays according to the shape of a patient.

CONSTITUTION: Energy of charged particle rays 1 made round and flat by a scanning electromagnet 2 is varied with a range-shifter 9. The range-shifter 9 is a plurality of boards made of: e.g., water, salt water, another liquid or copper, and makes energy of the charged particle rays 1 decrease corresponding to the thickness thereof.

Radiation energy can thus be varied without the variation of energy of an accelerator. A lesion is three-dimensionally and thus efficiently irradiated with radioactive rays by combination of the range-shifter 9 and a multi-collimator 4. The position for radiation in depth is adjusted with the range-shifter 9 and the shape of a plane perpendicular to a beam axis is freely varied with the multi-collimator.



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